

- $$\text{C}_6\text{H}_5\text{---}[\text{CH}_2]_n\text{---C(=O)O---R}$$

R is hydrogen or a C₁-C₃₀ hydrocarbon residue and
n is an integer of 1 to 5.

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- The chemical structure shows a cyclohexene ring with a double bond between the 1 and 2 o'clock positions. Substituents on the ring include a methyl group at the 12 o'clock position, a methyl group at the 6 o'clock position, and a long unsaturated side chain at the 3 o'clock position. The side chain consists of a trans-double bond, followed by a methyl group, a trans-double bond, a zigzag line representing a methylene group, a trans-double bond, a methyl group, and a final carbon atom bonded to R⁸, R⁹, and R¹⁰. On the cyclohexene ring, the 9 o'clock position has a methyl group, the 10 o'clock position has a substituent R⁶ with a wedge bond, and the 11 o'clock position has a substituent R⁷ with a dashed bond.

wherein R⁶ and R⁷ are independently of each other hydrogen or hydroxy or R⁶ and R⁷ together form an oxygen atom
R⁸ and R⁹ are hydrogen or R⁸ and R⁹ together form an oxygen atom

R¹⁰ is hydrogen, hydroxy or a residue OR¹¹

R¹¹ is C₁-C₂₀ alkyl (preferably C₁-C₆ alkyl), C₂-C₂₀ alkenyl (preferably C₂-C₆ alkenyl), C₆-C₂₀ aryl, C₇-C₂₀ alkylaryl or a residue -C(O)-R¹²

R¹² is C₁-C₂₀ alkyl (preferably C₁-C₆ alkyl) or C₂-C₂₀ alkenyl (preferably C₂-C₆ alkenyl).

5. Composition according to any of claims 1 to 4, which is a topical composition.
6. Composition according to any of claims 1 to 5, wherein the composition contains the HDAC inhibitor in a concentration of 0.001 to 50 wt.-%, based on the weight of the composition.
7. Composition according to claim 6, wherein the HDAC inhibitor is present in a concentration of 0.01 to 1 wt.-%, based on the weight of the composition.
8. Composition according to any of claims 1 to 7, wherein the retinoid is present in a concentration of 0.001 to 50 wt.-%, based on the weight of the composition.
9. Composition according to claim 8, wherein the retinoid is present in a concentration of 0.1 to 15 wt.-%, based on the weight of the composition.
10. Composition according to any of claims 1 to 9, wherein the ratio of the HDAC inhibitor to the retinoid is from 30:1 to 1:30, based on the weight.
11. Composition according to any of claims 1 to 10, which is a cosmetic composition.
12. Use of a combination of an HDAC inhibitor and a retinoid for the preparation of a composition for providing a cosmetic effect.
13. Use according to claim 12, wherein the cosmetic effect is treatment or prophylaxis of wrinkles or dry skin or sensitive skin or any symptoms caused by negative developments of the physiological homeostasis of healthy skin, promotion of hair growth, protection from hair loss, a thickening of the epidermis, anti-acne, the inhibition of senescence of skin cells, prevention or treatment of photodamage, prevention or treatment of oxidative stress phenomena, prevention or treatment of cellulite, prevention or treatment of pigmentation disorders and/or even the skin tone, prevention and treatment of disturbances in ceramide

and lipid synthesis, prevention of excess sebum production, reduction of activities of matrix metallo proteases or other proteases in the skin, treatment and prevention of inflammatory skin conditions including atopic eczema, polymorphic light eruption, psoriasis, vertiligo, prevention and treatment of itchy or irritated skin.